



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/796,653	03/09/2004	Jonathan James Palmer	1322/165	2215
25297 7590 04/30/2008 JENKINS, WILSON, TAYLOR & HUNT, P. A. 3100 TOWER BLVD., Suite 1200 DURHAM, NC 27707				
EXAMINER KAO, WEI PO ERIC				
ART UNIT 2616		PAPER NUMBER		
MAIL DATE 04/30/2008		DELIVERY MODE PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/796,653

Applicant(s)

PALMER ET AL.

Examiner

WEI-PO KAO

Art Unit

2616

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14 and 32 is/are allowed.
- 6) ☐ Claim(s) 1-13, 15-31, 33-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-40 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejection - 35 USC § 103

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 2, 3, 4, 5, 11, 13, 16, 18, 19, 21, 22, 25, 26, 30, 31, 34, 35, 36 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindquist et al, U.S. Patent No 5852660 in view of Ashdown et al, U.S. Patent No 6625273 and the background of Leung et al, U.S. Publication No 20010053218.

Regarding Claim 1, Lindquist et al teach that **a method for performing stateful signaling transactions in a distributed processing environment** (see Abstract, Figures 1 and 2, Column 2 Line 50-67, Column 3 Line 1-7 i.e. it is stateful because the invention converts the traffic from one standard/state to a second standard/state), **the method comprising: (a) receiving a first signaling message** (see Figures 5 and 6, Column 6 Line 19-21); **(b) forwarding the first signaling message to a first stateful processing module** (see Figures 5 and 6 Element 370, Column 6 Line 21-23); **(c) at the first stateful processing module: (i) generating a stateful transaction query message based on the first signaling message** (see Column 6 Line 23-30); **and (iii) forwarding the stateful transaction query message to a destination** (see Column 6 Line 30-35); **and (d) receiving a response to the stateful transaction query message** (see Column 3 Line 1-7). However, Lindquist et al do not teach that **the method comprising: (b) forwarding the first signaling message to a first stateful processing module of a plurality of stateful processing modules**. Ashdown et al from the same field of endeavor teach that **the method comprising: (b) forwarding the first signaling message to a first stateful processing module of a plurality of stateful processing modules located in the same node** (see Abstract, Figures 2 and 3, Column 2 Line 53-59, Column 3 Line 8-13 37-49, Column 4 Line 55-67, Column 5 Line 1-6 i.e. according to figures 2 and 3 and column 4 line 55-67, column 5 line 1-6 a ICP is able to handle at least a linkset between a source-destination pair; also according to the column 3 line 37-39 and column 5 line 1-6, more than one ICP is possible; therefore, Ashdown et al suggest that two or more ICPs can be implemented to handle two ore more linksets; when in view with Lindquist's inventive STP, in particular figure 6, it is understandable for a person ordinary skill in the art to implement multiple ICPs and converter pairs in the STP of Lindquist's

in order to handle multiple linksets; in another words the combination yields that the STP of Lindquist's comprises two or more ICPs-converter pairs to handle two or more linksets respectively). At the time of the invention, it would have been obvious to a person ordinary skill in the art to implement multiple ICP-converter pairs in the international STP gateway to handle plurality of linksets. The rationale would have been that with such combination, Lindquist's invention benefits from the advantage of Ashdown' invention, namely quick response to a query of requiring standard conversion.

Still regarding Claim 1, Lindquist et al and Ashdown et al teach all the limitations in claim 1 except that the method comprising: **(ii) inserting an identifier in the stateful transaction query message for identifying the first stateful processing module; (d) receiving a response to the stateful transaction query message, the response including the identifier; (e) using the identifier to distribute the response to the first stateful processing module that originated the stateful transaction query message from among the plurality of stateful processing modules located in the same node.** the background of Leung et al from the same field of endeavor teach that **(ii) inserting an identifier in the stateful transaction query message for identifying the first stateful processing module; (d) receiving a response to the stateful transaction query message, the response including the identifier; (e) using the identifier to distribute the response to the first stateful processing module that originated the stateful transaction query message from among the plurality of stateful processing modules located in the same node** (see Abstract, [0004-0005] i.e. according to the concept established above that a ICP-converter pair is able to handle at least one linkset and consider the

case where each ICP-converter pair is handling only one linkset with one transaction, when in view of the background of Leung et al, the unique transaction identification not only identify a particular transaction carried by a linkset, but also identify the ICP-converter pair carrying the linkset). At the time of the invention, it would have been obvious to a person ordinary skill in the art to identify not only each unique transaction but also the unique ICP-converter pair by inserting the ID in the messages. The rationale would have been that it is desired to reduce the error in processing the transaction and increase the performance of the system.

Regarding Claim 2, Lindquist et al further teach that **the method wherein receiving a first signaling message includes receiving a first transaction capabilities application part (TCAP) query message and wherein the method further comprises buffering the first TCAP query message at the first stateful processing module** (see Figure 3, Column 2 Line 40-47, Column 3 Line 63-67, Column 4 Line 1-6 64-67, Column 5 Line 1-15).

Regarding Claim 3, Lindquist et al further teach that **the method wherein formulating a stateful transaction query message includes formulating a second TCAP query message based on the first TCAP query message** (see Column 6 Line 35-40).

Regarding Claim 4, Lindquist et al further teach that **the method wherein receiving a first signaling message includes receiving an ISDN user part (ISUP) message and wherein the**

method further comprises buffering ISUP message at the first stateful processing module
(see Figure 2, Column 4 Line 22-45, Column 6 Line 23-27).

Regarding Claim 5, Lindquist et al further teach that **the method wherein formulating a stateful transaction query message includes formulating a transaction capabilities application part (TCAP) query message based on the ISUP message** (see Column 6 Line 35-40).

Regarding Claim 11, Ashdown et al further teach that **the method wherein receiving a response to the stateful transaction query message includes receiving the response at a link interface module and wherein using the identifier to distribute the response to the first stateful processing module includes decoding the identifier at the link interface module and sending the response to the stateful processing module corresponding to the identifier** (see Figure 3 Elements 304, Column 5 Line 40-67, Column 6 Line 1-17). At the time of the invention, it would have been obvious to a person ordinary skill in the art to implement multiple ICP-converter pairs in the international STP gateway to handle plurality of linksets. The rationale would have been that with such combination, Lindquist's invention benefits from the advantage of Ashdown' invention, namely quick response to a query of requiring standard conversion.

Regarding Claim 13, Ashdown et al further teach that **the method wherein receiving a response to the stateful transaction query message includes receiving the response at a link interface module and wherein using the identifier to distribute the response to the first stateful processing module includes forwarding the response to a distribution module, and, at the distribution module, decoding the identifier and forwarding the stateful transaction query message to the first stateful processing module** (see Figure 3 Elements 302 and 304, Column 5 Line 40-67, Column 6 Line 1-17). At the time of the invention, it would have been obvious to a person ordinary skill in the art to implement the distribution module in the conversion system. The rationale would have been that centralized distribution mechanism allows users to monitor the traffic at the node with ease.

Regarding Claim 16, Lindquist et al further teach that **the method wherein steps (a)-(e) are performed at a signal transfer point (STP)** (see Figure 6).

Regarding Claims 18 and 19, the background of Leung et al further teach that **the method wherein generating a stateful transaction query message includes generating a plurality of stateful transaction query messages, wherein receiving a response includes receiving a response to each query message, and wherein using the identifier to distribute the response includes using the identifier to distribute the response to each query message; the method wherein receiving a response to the stateful transaction query message includes receiving multiple responses to the stateful transaction query message, each response including the**

identifier, and wherein using the identifier to distribute the response to the first stateful processing module includes using the identifier to distribute each response to the first stateful processing module (see [0004] [0021]). At the time of the invention, it would have been obvious to a person ordinary skill in the art to identify not only each unique transaction but also the unique ICP-converter pair by inserting the ID in the messages. The rationale would have been that it is desired to reduce the error in processing the transaction and increase the performance of the system.

Regarding Claim 21, it is an apparatus claim corresponding to the method claim 1, and therefore rejected under the same reason set forth in the same section of claim 1 in this paragraph.

Regarding Claim 22, Ashdown et al further teach that **the telecommunications network element of claim 21 wherein the link interface module comprises an SS7 link interface module for sending and receiving SS7 messages and for forwarding signaling connection control part (SCCP) messages to the stateful processing modules** (see Figure 3 Elements 304, Column 5 Line 40-67, Column 6 Line 1-17). At the time of the invention, it would have been obvious to a person ordinary skill in the art to implement multiple ICP-converter pairs in the international STP gateway to handle plurality of linksets. The rationale would have been that with such combination, Lindquist's invention benefits from the advantage of Ashdown's invention, namely quick response to a query of requiring standard conversion.

Art Unit: 2616

Regarding Claims 25, 26, 30, 31 they are apparatus claims corresponding to the method claims 3, 4, 13, 16 and therefore rejected under the same reason set forth in the same section of claims 3, 4, 13, 16 in this paragraph.

Regarding Claims 34, 35, 36 and 40 they are computer program product claims corresponding to the method claims 1, 5, 3 and 11 and therefore rejected under the same reason set forth in the same section of claims 1, 5, 3 and 11 in this paragraph.

6. Claims 6, 7, 17, 23, 27 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindquist et al, U.S. Patent No 5852660, Ashdown et al, U.S. Patent No 6625273 and the background of Leung et al, U.S. Publication No 20010053218 as applied to claim 1 above, and further in view of D'Eletto U.S. Publication No 20050094623.

Regarding Claim 6, Lindquist et al, Ashdown et al and the background of Leung et al teach all the limitations in claim 1 except that **the method wherein receiving a first signaling message includes receiving an IP telephony signaling message and wherein the method further comprises buffering the IP telephony signaling message at the first stateful processing module.** D'Eletto from the same field of endeavor teach that **the method wherein receiving a first signaling message includes receiving an IP telephony signaling message and wherein the method further comprises buffering the IP telephony signaling message at the first**

stateful processing module (see Abstract, [0032] [0067]). At the time of the invention, it would have been obvious to a person ordinary skill in the art to implement the IP/SS7 traffic monitoring mechanism with the conversion system. The rationale would have been that by monitoring the traffic, error of the conversion can be reduced and the correcting action can be taken immediately.

Regarding Claim 7, Lindquist et al further teach that **the method wherein formulating a stateful transaction query message includes formulating a transaction capabilities application part (TCAP) query message based on the received IP telephony signaling message** (see Column 6 Line 35-40).

Regarding Claim 17, Lindquist et al, Ashdown et al and the background of Leung et al teach all the limitations in claim 1 except that **the method wherein the stateful transaction query message and the response comprise IP-based messages**. D'Eletto from the same field of endeavor teach that **the method wherein the stateful transaction query message and the response comprise IP-based messages** (see Abstract, [0032] [0067]). At the time of the invention, it would have been obvious to a person ordinary skill in the art to implement the IP/SS7 traffic monitoring mechanism with the conversion system. The rationale would have been that by monitoring the traffic, error of the conversion can be reduced and the correcting action can be taken immediately.

Regarding Claim 23, Lindquist et al, Ashdown et al and the background of Leung et al teach all the limitations in claim 1 except that **the telecommunications network element wherein the link interface module comprises an IP telephony link interface module for sending and receiving IP telephony signaling messages and for forwarding predetermined IP telephony signaling messages to the stateful processing modules.** D'Eletto from the same field of endeavor teach that **the telecommunications network element wherein the link interface module comprises an IP telephony link interface module for sending and receiving IP telephony signaling messages and for forwarding predetermined IP telephony signaling messages to the stateful processing modules** (see Abstract, Figures 2 and 3, [0032] [0044-0045] [0067]). At the time of the invention, it would have been obvious to a person ordinary skill in the art to implement the IP/SS7 traffic monitoring mechanism with the conversion system. The rationale would have been that by monitoring the traffic, error of the conversion can be reduced and the correcting action can be taken immediately.

Regarding Claim 27, it is an apparatus claim corresponding to the method claim 6 and therefore rejected under the same reason set forth in the same section of claim 6 in this paragraph.

Regarding Claim 37, it is computer program product claim corresponding to the method claim 7 and therefore rejected under the same reason set forth in the same section of claim 7 in this paragraph.

7. Claims 8, 9, 10, 12, 20, 24, 28, 29, 38 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindquist et al, U.S. Patent No 5852660, Ashdown et al, U.S. Patent No 6625273 and the background of Leung et al, U.S. Publication No 20010053218 as applied to claims 1, 21 and 34 above, and further in view of Redmill, An Introduction to SS7.

Regarding Claim 8, Lindquist et al, Ashdown et al and the background of Leung et al teach all the limitations in claim 1 except that **the method wherein forwarding the first signaling message to a first stateful processing module of a plurality of stateful processing modules includes selecting the first stateful processing module from the plurality of stateful processing modules using a load sharing algorithm.** Redmill from the same field of endeavor teaches that **the method wherein forwarding the first signaling message to a first stateful processing module of a plurality of stateful processing modules includes selecting the first stateful processing module from the plurality of stateful processing modules using a load sharing algorithm** (see Page 9 Line 12-16, Page 14 Line 32-39). At the time of the invention, it would have been obvious to a person ordinary skill in the art to implement the load-sharing algorithm to distribute messages among a plurality of processing modules; include ID in the TCAP message to identify each transaction. The rationale would have been that with load sharing algorithm, a fail processing module will not cause a communication between two SPs to break down especially when the traffic is heavy; it is desired to have a flow mechanism to control great amount of data traffic between two SPs.

Regarding Claims 9 and 10, Lindquist et al, Ashdown et al and the background of Leung et al teach all the limitations in claim 1 except that **the method of wherein inserting an identifier in the stateful transaction query message includes placing the identifier in a field in the stateful transaction query message for causing the destination to insert the identifier in the response; The method wherein the stateful transaction query message comprises a transaction capabilities application part (TCAP) message and the field comprises a transaction identifier field in the TCAP message.** Redmill from the same field of endeavor teaches that **the method of wherein inserting an identifier in the stateful transaction query message includes placing the identifier in a field in the stateful transaction query message for causing the destination to insert the identifier in the response; The method wherein the stateful transaction query message comprises a transaction capabilities application part (TCAP) message and the field comprises a transaction identifier field in the TCAP message** (see Page 12-13 Section 4.5). At the time of the invention, it would have been obvious to a person ordinary skill in the art to implement the load-sharing algorithm to distribute messages among a plurality of processing modules; include ID in the TCAP message to identify each transaction. The rationale would have been that with load sharing algorithm, a fail processing module will not cause a communication between two SPs to break down especially when the traffic is heavy; it is desired to have a flow mechanism to control great amount of data traffic between two SPs.

Regarding Claim 12, Lindquist et al, Ashdown et al and the background of Leung et al teach that **the method wherein receiving a response to the stateful transaction query message includes**

receiving the response at a link interface module (see Ashdown et al, Figure 3, Column 3 Line 50-67, Column 5 Line 13-25 40-67, Column 6 Line 1-17). However, Lindquist et al, Ashdown et al and the background of Leung et al do not teach that **the method wherein using the identifier to distribute the response to the first stateful processing module includes forwarding the response to a second stateful processing module using a load sharing algorithm**. Redmill from the same field of endeavor teaches that **the method wherein using the identifier to distribute the response to the first stateful processing module includes forwarding the response to a second stateful processing module using a load sharing algorithm** (see Page 14 Line 32-39). At the time of the invention, it would have been obvious to a person ordinary skill in the art to implement the load-sharing algorithm to distribute messages among a plurality of processing modules; include ID in the TCAP message to identify each transaction. The rationale would have been that with load sharing algorithm, a fail processing module will not cause a communication between two SPs to break down especially when the traffic is heavy; it is desired to have a flow mechanism to control great amount of data traffic between two SPs.

Regarding Claim 20, Lindquist et al, Ashdown et al and the background of Leung et al teach all the limitations in claim 1 except that **the method wherein forwarding the stateful transaction query message to a destination includes inserting an entity address of a first signal transfer point of a mated pair of signal transfer points in the stateful transaction query message, forwarding the stateful transaction query message from the first signal transfer point to the destination and wherein receiving the response includes receiving the response at a second**

signal transfer point of the mated pair of signal transfer points, decoding the response and extracting an entity address from the response, determining that the entity address corresponds to the first signal transfer point, and forwarding the response to the first signal transfer point. Redmill from the same field of endeavor teaches that **the method wherein forwarding the stateful transaction query message to a destination includes inserting an entity address of a first signal transfer point of a mated pair of signal transfer points in the stateful transaction query message, forwarding the stateful transaction query message from the first signal transfer point to the destination and wherein receiving the response includes receiving the response at a second signal transfer point of the mated pair of signal transfer points, decoding the response and extracting an entity address from the response, determining that the entity address corresponds to the first signal transfer point, and forwarding the response to the first signal transfer point** (see Page 5-7 Section 3). At the time of the invention, it would have been obvious to a person ordinary skill in the art to implement the load-sharing algorithm to distribute messages among a plurality of processing modules; include ID in the TCAP message to identify each transaction. The rationale would have been that with load sharing algorithm, a fail processing module will not cause a communication between two SPs to break down especially when the traffic is heavy; it is desired to have a flow mechanism to control great amount of data traffic between two SPs.

Regarding Claims 24, 28 and 29, they are apparatus claims corresponding to the method claims 12, 9 and 10 and therefore rejected under the same reason set forth in the same section of claims 12, 9 and 10 in this paragraph.

Regarding Claims 38 and 39, they are computer program product claims corresponding to the method claims 9 and 10 and therefore rejected under the same reason set forth in the same section of claims 9 and 10 in this paragraph.

8. Claims 15 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindquist et al, U.S. Patent No 5852660, Ashdown et al, U.S. Patent No 6625273 and the background of Leung et al, U.S. Publication No 20010053218 as applied to claims 1 and 21, and further in view of Brockman et al, U.S. Patent No 6249572.

Regarding Claim 15, Lindquist et al, Ashdown et al and the background of Leung et al teach all the limitations in claim 1 except that **the method comprising formulating a transaction detail record (TDR) based on the stateful transaction.** Brockman et al from the same field of endeavor teaches that **the method comprising formulating a transaction detail record (TDR) based on the stateful transaction** (see Abstract, Column 2 Line 42-48). At the time of the invention, it would have been obvious to a person ordinary skill in the art to implement the record tracking method to the Ashdown's invention. The motivation would have been that it is desired to have a TCAP transactions monitoring system to correlate the TCAP transactions split scattering around different links between any pair of SPs.

Regarding Claim 33 it is an apparatus claims corresponding to the method claim 15 and therefore rejected under the same reason set forth in the same section of claim 15 in this paragraph.

Allowable Subject Matter

9. The following is a statement of reasons for the indication of allowable subject matter:

For claims 14 and 32, prior art fails to show alone or in combination that the stateful transaction query message and response message comprise transaction location information.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on

the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to WEI-PO KAO whose telephone number is (571)270-3128. The examiner can normally be reached on Monday through Friday, 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571)272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ricky Ngo/

Supervisory Patent Examiner, Art Unit
2616

/Wei-po Kao/

Examiner, Art Unit 2616